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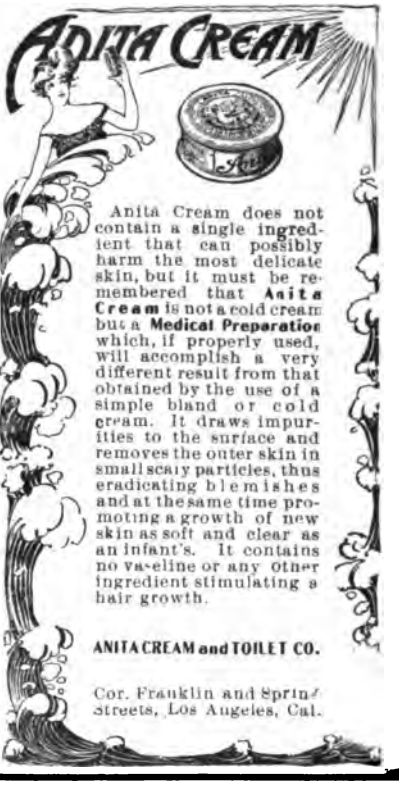

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CALIFORNIA
Medical and Surgical Reporter

VOLUME 2 LOS ANGELES, CAL., JUNE, 1906. NUMBER 6

ORIGINAL ARTICLES.

THE ETIOLOGY AND ABORTIVE TREATMENT OF MASTOIDITIS

By HILL HASTINGS, M. D., Los Angeles, Cal.

Read at the meeting of the Eye, Ear, Nose and Throat Section of the Los Angeles County Medical Association, May 11, 1906.

It is likely well within the facts to state that ninety out of one hundred cases of mastoiditis follow an ordinary "cold in the head." Of the remaining cases nearly all are traceable to inflammation of the naso-pharynz, such for instance as occurs during infectious diseases as scarlet fever, measles and diphtheria. It is desired for the purpose of this paper to lay a special stress on this well-known fact of general clinical experience because abortive measures to prevent a mastoid operation should be directed against the underlying causes and should be begun prior to the involvement of the mastoid cells. The writer asks your indulgence, therefore, in briefly reviewing the anatomy of the middle ear tract, and so much of the anatomy of the temporal bone as may be pertinent to this phase of the subject.

The middle ear tract begins in the naso-pharynx at the orifice of the eustachian tube and ends in the mastoid antrum. It is of scientific interest and also an aid to our conception of mastoiditis to learn from the Embryologist that the middle ear tract is formed from the first branchial cleft of the embryo. The development of the drum membrane closes the outer end of the cleft from the outer surface of the body. The inner end becomes the eustachian orifice. The tract may be looked upon as an accessory sinus of the naso-pharynx. Comparable in many ways to the accessory sinuses of the nose, as for instance the Frontal Sinus and its duct. It is lined with mucous membrane continuous with that of the naso-pharynx and is affected by inflammatory conditions of the latter. It is a far more important accessory sinus—if the term is permitted—than the Frontal Sinus, for two reasons:

1st.—The tympanic portion contains the sound conducting apparatus necessary for the sense of hearing.

2nd.—Its posterior extension is a small cavity, the mastoid antrum, which is in such intimate relationship with the mastoid cells that suppurative inflammation of the middle ear tract easily spreads into the mastoid process. The eustachian tube is the duct which permits more or less free entrance of air from the naso-pharynx to the tympanic portion of the middle ear cavity. Long, narrow, and almost impermeable when inflamed, the eustachian tube is a poor drainage canal, much inferior to the naso-frontal duct, to which by way of comparison your attention has been invited. On the other hand some anatomical differences probably explain why the middle ear cavity is less frequently inflamed than the frontal sinus. For, it is well-known that during attacks of "cold in the head" congestion if not active inflammation of the frontal sinus is nearly always present, whereas congestion and inflammation of the middle ear fortunately occur much less frequently. The main part of the middle ear cavity, the tympanum, is at considerable distance, about 1 1-2 inches from the pharyngeal orifice of the eustachian tube. Looking at the tympa-

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num proper in the specimen presented, we see it is not large, roomy and free as the frontal, sphenoid or even the ethmoid cells, but is small, irregular and partially divided by the ossicular chain and ligaments. Furthermore, we see that its backward prolongation, the antrum, is connected with the tympanum by a short constricted portion, the aditus. The middle ear cavity, therefore, is a more or less dumb-bell shape, the antrum being the posterior portion and the tympanum the anterior portion. As the whole cavity is lined with mucous membrane it is easily seen how the aditus, the constricted portion, may be entirely closed by swelling of its mucous membrane during suppurative inflammation, so that pus within the antrum may have no outlet.

The bone specimens also show how thin is the roof of the middle ear. This bony roof is lined on its lower surface by the muco-periosteum of the middle ear cavity and on its upper surface by the dura-mater covering the cerebrum. When we realize that the middle ear cavity is often full of pus from purulent inflammation of its mucous membrane, we do not wonder at the frequency of deaths reported in times gone by from so-called "brain fever," without the occurrence of the external signs of an abscess other than a discharging ear, which sign itself has until very recently received but scant consideration. Below the antrum are the mastoid cells, often pneumatic, as seen in the lead cast here presented. Behind the antrum is the knee of the lateral sinus often bulging far forward and separated by the thinnest of bony partitions. Lastly attention should be called to the deep-seated position of the antrum. It is at a depth of 1 inch on an average, from the outer surface of the mastoid process. Between the antrum and the hard bony outer surface of the mastoid is diploic tissue or pneumatic cells with hard bony partitions, or even dense bone. Therefore, except in very young children, softening of the inner bony table around the antrum is seen to have occurred and resulted in dangerous exposure of the dura or lateral sinus, without the formation of an external fistulous opening to give outlet to the pus.

With this brief review of the middle ear tract, its beginning and ending, one realizes that a suppurative otitis media is far more dangerous than a suppurative inflammation of any of the accessory sinuses of the nose.

What abortive measures should be taken to prevent mastoid involvement?

1st.—Inasmuch as a "cold in the head" is the underlying cause in an overwhelming majority of cases, we should direct our attention early to the naso-pharynx. It is important that we do not take such a pessimistic view of the efficiency of our therapeutic measures in treating a "cold in the head." That a cold in the head is hard to abort, difficult to cure and runs its course in spite of treatment, is confessed by most nose and throat men. Nevertheless that does not excuse us from neglecting the ordinary therapeutic measures that will protect the various accessory cavities of the nose and pharynx, of which the middle ear tract is most important. The nose should be kept clean by use of a bland saline solution, such as Seiler's solution. Swelling of the mucous membrane around the eustachian orifice should be kept down by local application of cocaine and adrenalin, followed by an astringent application of 10% nitrate of silver. The use of a bland oil with camphor-menthol will somewhat lessen the congestion of the naso-pharynx. Rest in bed, when possible, and the usual internal medication, cathartic and diaphoretic, in the early stage, is, of course, taken for granted. So much in brief for the nasal condition.

On the first appearance of stuffing of the ear, the eustachian tube should be cocainized and opened by a gentle inflation, after thorough cleansing of the naso-pharynx. This will reduce the passive congestion of the middle ear tract, which congestion as elsewhere, makes a fertile field for the growth of pyrogenic organisms.

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2nd.—If in spite of all precautions suppurative inflammation of the middle ear develops abortive measures may be efficient if used early. Very frequently the patient himself does not apply for relief until the middle ear inflammation has existed for two or three days and resulted finally in rupture of the drum membrane—nature's method of securing drainage. It should be remarked that such a perforation is usually adequate. If, however, the case is seen within the first twenty-four hours after the appearance of the severe ear-ache a thorough incision of the bulging drum membrane should be made. The condition is that of a septic cavity without an outlet and calls for drainage. Palliative measures, such as sweet oil and laudanum may be of some comfort but can do absolutely nothing toward aborting mastoiditis. Prompt incision of the drum membrane affords the rational chance of relief. It is, of course, understood that inflammation of the muco-periosteum of the mastoid cells adjacent to the antrum may have already occurred. Nevertheless incision of the drum membrane will afford better drainage. After the incision the ear canal should be syringed every two hours and dried with a wick of cotton.

As to the value of local applications to the mastoid opinions vary. Ice applications during the first twenty-four to forty-eight hours give some comfort and are thought by some to be of value as an abortive measure. On the other hand after the onset of mastoid suppuration the use of ice is to be condemned, for it benumbs the mastoid to such an extent that it is impossible to accurately estimate the tenderness—the most important sign to watch as an indication for operation. The use of leeches is advocated by some during the first day or two after the onset of the ear trouble. One leech should be applied immediately behind the mastoid tip and another in front of the ear canal. Rest in bed, free catharsis and a light diet are, of course, aids to the local treatment.

In conclusion the writer wishes to emphasize the two most important abortive measures.

1st.—Careful treatment of the nasopharynx during the course of every "cold in the head."

2nd.—Prompt and thorough incision of the drum membrane on the appearance of suppurative inflammation of the middle ear.

MASTOIDITIS—SYMPTOMS AND PHYSICAL SIGNS

By ROBERT W. MILLER, M. D., Los Angeles, Cal.

Read at the meeting of the Eye, Ear, Nose and Throat Section of the Los Angeles County Medical Association. May 11, 1906.

PAIN.

In all cases of mastoiditis the one symptom always present at some stage, is pain. The severity varies according to the stage of the disease and conditions present in the individual case. We may say parenthetically that in a very large proportion of cases of acute suppurative otitis media the morbid process extends to and involves the mastoid antrum. By some otologists this cavity is rather considered a part of the tympanum; hence in many cases of acute purulent otitis media., prior to incision or spontaneous perforation of the membrana tympani, pain is felt not only in the middle ear but *over* and at the tip of the mastoid process. In those cases in which the suppurative process does not extend beyond the antrum, the pain usually ceases as soon as the intra tympanic pressure is relieved. In cases of mastoiditis proper, however, the pain in the mastoid region increases, deepens and extends to the entire side of the head.

In the later stage, if the suppurative process involve the tip of the mastoid process or if pus be burrowing in the digastric groove or along the sterno-clido-mastoid muscle, pain will be felt in those regions when rotation of the head

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is attempted. The pain is almost invariably most severe at night.

A child having purulent mastoiditis may be fairly comfortable and enjoy its play and its meals in day-time, but does not sleep quietly and naturally at night. It is likely to fret or cry and to rotate or shift the head at short intervals.

The pain, which is at first keen, intense and lancinating, assumes later a boring character.

In the earlier stages it is usually constant and so it is later, yet the intensity varies within such wide limits that in some cases it is quite difficult to differentiate between it and that of a neuralgia affecting the nerves of this region.

I wish to especially emphasize the fact that a deception is often found in both the lay and sometimes in the professional mind, to-wit: That as the case progresses the pain sometimes almost entirely subsides, and the general condition of the patient closely approaches the normal, hence the inference that recovery is surely well under way,—proposed operative interference on the part of the aural surgeon seems ill advised or even preposterous. In such a case, with a continued free purulent discharge of from four to six weeks or with a recent marked diminution or entire cessation of such discharge, yet with a bulging of the postero-superior portion of the membrana tympani and a sagging of the roof of the auditory canal, with or even without tenderness under deep pressure immediately over the antrum or near the tip, the absence of the pain ceases to be a reliable symptom as indicating the presence of mastoiditis.

Another important fact not usually mentioned in text books:—After the disease has existed for some days or weeks (a specific time limit cannot be fixed) pain in the mastoid area becomes almost nil but persists along the course of the temporal and sometimes the occipital nerves. I have seen this in quite a number of cases of suppurative mastoiditis. The subsidence of the pain in the mastoid process and tympanum is explained by the fact that the mastoid cells, together with their trabeculae and nerve elements have been broken down, in many cases only the cortical and other walls of the structure remaining, hence nerve pressure and the resultant pain are greatly diminished.

Tenderness.

Next to pain, and closely related to it is tenderness. In mastoiditis secondary to otitis media, unusual tenderness is found to affect the membrana and auditory canal, especially its upper and posterior portions and usually the entire mastoid area. It must be understood that we refer to the tenderness elicited especially by deep pressure and not that found in dermatitis, whatever may be the origin of the latter.

The point of tenderness of greatest significance is found close to the pinna, immediately behind the external audiory meatus, and next to that over and near the tip of the mastoid process.

Tenderness of the tragus is not indicative of mastoiditis but of otitis media.

Tumefaction behind the auricle is usually slight or absent except in mastoiditis occurring in childhood.

Swelling.

Oedema of the overlying soft parts with or without marked diminution of the lumen of the auditory canal, indicates that the seat of the chief trouble will be found in the auditory canal.

Fluctuation, especially if well marked, means spontaneous evacuation of the purulent contents of the mastoid. If after incision and drainage the sensitiveness over and pain in the mastoid increase, or, after faithful application of the ice-bag for about ninety-six hours, the swelling of the periosteum does not subside, the bone is probably diseased.

If after four weeks from the beginning of an otitis media, the discharge continues profuse, disease of the bone should be suspected.

In periostitis, and when pus has burrowed under the skin of the auditory meatus, the tumor becomes constricted to a narrow cleft owing to a depression of the roof and posterior wall of the

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canal, there is no reason to doubt that the bone is carious. Except in certain cases of trauma it may be safely asserted that a purulent collection beneath the periosteum points to disease of the bone beneath.

TRANS-ILLUMINATION.

In some cases trans-illumination is a valuable diagnostic aid, the affected area appearing darker than its surroundings or the mastoid of the opposite side. However it cannot be relied upon as one of the cardinal diagnostic measures.

The constitutional symptoms are often quite out of proportion to the severity and gravity of the disease.

During the earlier stages, the pulse is somewhat accelerated,—ranging from 80 to 110, and the temperature from 99.5 to 101.5. Even with a steady accumulation of local evidence of mastoiditis, the pulse rate, temperature and even the general condition may show a steady or somewhat interrupted trend toward the normal. This is a point of paramount importance, yet observation has indicated that it is not infrequently overlooked. Careful investigation along the lines mentioned in a preceding paragraph will rarely fail to reveal the true condition.

MASTOID MENINGITIS

By ROSS MOORE. M. D ,
Clinical Assistant in Neurology, Medical Department, University of Southern California, Los Angeles. California. Read at the meeting of the Eye, Ear, Nose and Throat Sectionof the Los Angeles County Medical Association, May 11, 1906.

Meningitis due to middle ear or mastoid disease is the half-way house in the path of an infection between the external world and brain abscess. Probably one-third of the latter are due to middle ear disease.

This being true, the importance of an early diagnosis of meningeal infection becomes at once apparent. Notwithstanding our rapidly improving technic in cerebral surgery, the occurrence of brain abscess is so uniformly fatal as to be as yet little more than a diagnostic and pathological curiosity, and therefore it is only in this early or meningeal stage that treatment can be begun with a reasonable hope of success.

Theoretically speaking, meningitis from infectious ear trouble ought never to occur except as a result of direct extension along the sheath of the auditory nerve. Practically speaking, it is the bane of the operating otologist, because of the late stage in which so many cases are seen first, and the lack of assurance concerning the removal of all infected foci at operation.

The diagnosis of otitic meningitis depends on the recognition of the usual general symptoms of meningitis plus those due to the location of the primary infection. Middle ear disease may attack the tympanic cavity, the labyrinth, and the mastoid cells separately, or all at once. Port mortem and anatomical evidence indicate that tympanic disease leads most frequently to caries of the vault of the tympanum and inflammation of the meninges of the temporal lobe of the brain and the middle fossa of the skull; while labyrinthine and mastoid disease give rise to inflammation of the cerebellar and posterior fossa meninges. The posterior fossa is on a much lower level than anterior and middle and is separated from them by the strong barrier of the Tentorium Cerebelli. This tends to limit meningeal inflammation due to mastoiditis to the cerebellum, medulla, and cord. This is true in adults especially. In children the thick wall over the posterior sides of the mastoid cells frequently proves so resistant as to force the infection into the middle fossa and fore brain rather than the hind brain.

The onset of a typical meningitis during the course mastoiditis in the adult, then, will be ushered in with the ordinary symptoms of meningeal irritation

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plus more or less marked disturbances of equilibrium and with irritability of the medulla and spinal function most marked. The basal ganglia, the speech, the cerebral motor centres, and the mentality are not so likely to be affected.

In differentiation from cerebral abscess the salient points to be remembered are the following;—in meningitis there are severe pain, hyperesthesia, heightened sensation of all kinds, general rigidity,—in a word, neural and psychic exaltation and tonicity; while in cerebral abscess we find dull headache, vomiting due to spasmodic nervous action, somnolence, apathy, uncertainty of movement, nielateral paralyses, convulsions, coma,—in a word neural and psychic depression.

From the view point of the neurologist the prevention of meningitis is of prime importance. Such delicate structures as dura, pia, and arachnoid, should not have the indignity and shock of infection either acute or chronic put upon them. Recovery can never be complete. Any discharge from the middle ear which tends to become chronic and which does not yield to thorough treatment is sufficient indication for laying wide open the entire infected area in order that the meningitis may be prevented, or before the development of an abscess gives the cue for the closing scene.

BRAIN ABSCESS

Dr. James T. Fisher did not present a paper, but spoke very briefly of the pathogenesis of Brain Abscesses and the difficulty of making any diagnosis in a certain class of cases. He referred to the fact that definite symptoms, either irritative or from pressure, were made manifest, by the location of the abscess; that many parts of the brain had so-called latent areas, which could sustain great pressure if slowly produced and exhibit few if any symptoms.

Abscesses could form by direct extension of inflammation from the middle ear, by continuity of tissue and ordinarily were extra dural; they might, if the virulence of micro organism were great enough, extend through the dura and become encysted in the white matter and remain quiescent, for months and years, till rupture ended life.

Dr. Fisher expressed his belief that brain abscess will continue to occur in spite of all prophylactic care and treatment and that out treatment should be to enter the skull with a large generous bone flap, expose the brain and follow the path of infection and drain. This if only a well grounded suspicion of abscess exists.

INDICATIONS FOR THE MASTOID OPERATION

By FRANK W. MILLER, M. D., Los Angeles, Cal.

Read at the meeting of the Eye, Ear, Nose and Throat Section os the Los Angeles County Medical Association, May 11, 1906.

Aurists are well agreed as to the general indications for the mastoid operation. It is only in the minor or secondary symptoms that a difference of opinion exists.

The significance and weight to be given each of the symptoms, that has been described, is often a matter of individual experience and preferment and frequently the indications for operation cannot be based upon any symptom or group of symptoms, but must be determined after carefully weighing every feature of the case.

Since the above is true, I can only give those features that personally, I believe to indicate and determine immediate operation—well knowing that a dif-

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ference of opinion, on certain of the points exists and that they are perhaps contrary to text-book teachings

Operation is indicated:

I. When a diagnosis of empyema or necrosis of the mastoid *cells* is positively made.

When this stage is reached, abortive measures are futile and drainage must be established as in infective bone lesions elsewhere.

The presence of pus in the antrum is not necessarily an indication for operation, for in the vast majority of cases of acute suppurative otitis media, pus is found in the antrum as a direct extension of the purulent process from the tympanic cavity and usually subsides as the latter clears up.

II. When there is external evidence of periostitis, cortical fistula or subperiosteal pus. These symptoms are all late in appearing and the diagnosis should always be made before they occur. Care is always necessary to exclude from all of these cases, furuncles and cellulitis from any other cause.

III. When abortive measures fail to cure or produce decided benefit after 48 hours trial.

In those cases where abortive measures are successful there always arises the question of mistaken diagnosis.

They may ameliorate and mask the true condition of affairs but frequently allow the process to proceed unchecked and result in disastrous extension of the disease to deep and vital parts.

IV. When the profuse discharge of a suppurative otitis media suddenly ceases with a persistence of other mastoid symptoms.

V. When the drainage is insufficient as indicated by a bulging of Schrapnel's membrane or a sagging of the posterior-superior canal wall.

VI. When there is the slightest indication of intracranial involvement.

VII. When mastoid tenderness persists after free incision of Schrapnel's membrane. Mastoid tenderness usually is present at four points, viz:

(a) Antrum.
(b) Tip.
(c) Ant. wall of antrum.
(d) Emissary veins.

It may be present at all or any one of these points.

VIII. When mastoid tenderness having been present and having disappeared and a discharge from the tympanic vault resists all rational non-operative measures.

IX. When there develops, after a clearing of the mastoid, symptoms of septic absorption that careful exclusion fails to locate elsewhere.

X. When in doubt. The improved technic and knowledge of the operation has practically rendered exploration of the mastoid, free from danger when properly performed and often extensive involvement have been discovered out of all proportion to the external manifestations.

I have purposely avoided two features that are sometimes considered under indications for operation, viz: Temperature and bacteriological examination.

Temperature is positively of no value either for diagnostic or operative purposes. It is erratic and inconstant and has no place in the list of symptoms or indications.

Bacteriological examination is of occasional value, but the severity of the process depends more upon the virulency of the germ than the kind. However, a culture should always be made if possible, for it may be of value relative to the prognosis.

THE MASTOID OPERATION

By ERNEST W. FLEMING, M. D., Los Angeles, Cal.

Read at the meeting of the Eye, Ear, Nose and Throat Section of the Los Angeles County Medical Association, May 11, 1906.

The time allotted for the presentation of this division of the topic under discussion admits of but a crude handling of the subject, and I shall be able to

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touch only briefly upon some of the main points to be observed in the performance of the ordinary mastoid operation.

The first point to be remembered is that absolute asepsis must be preserved throughout the entire procedure. The patient's scalp should be shaven over an area of three inches in every direction from the center of the meatus four or five hours before the time of the operation. The field of operation should now be rendered aseptic as possible by thoroughly scrubbing with green soap, washed over with alcohol or ether, then dressed with a moist bichloride pack and bandaged.

Just before operation, the patient being anaesthetized, the ear canal is thoroughly cleansed with a bichloride solution of 1-5000, dried out and packed with aseptic gauze, and the field of operation again rendered sterile. The other half of the head, the neck and shoulders are covered with sterile towels.

The next step in this operation is the primary incision over the mastoid process. This incision through the soft parts should extend from a point just below the tip of the mastoid process to a point just above the superior attachment of the auricle, and should follow closely the auricular attachment, lying about a quarter of an inch behind this line. The incision is at once continued down to the bone at the same time dividing the periosteum. Considerable haemorrhage follows and should be controlled by the assistant with sponges, until the bleeding vessels are caught up by clamps and the periosteum pushed forwards and backwards with the periosteal elevator so that the upper and posterior margins of the bony meatus and mastoid surface are freely exposed. After the flaps are retracted the tip of the mastoid should be laid bare by cutting the tendinous insertion of the sterno-mastoid muscle with scissors curved on the flat; the scissors should be kept closely applied to the surface of the bone, and all the attachments should be cut away until the finger can be passed completely beneath the tip of the mastoid into the digastric fossa.

After the mastoid is sufficiently exposed and the landmarks visible the operator should proceed to enter the mastoid antrum. This large bony space lies within the area of the supra-meatal triangle and in 95 per cent. of all mastoids is to be found at an angle of 45 degrees (or thereabout) upward and backward from the bony meatus at a depth of from one-half to three-quarters of an inch beneath the cortex. With a gouge or chisel of medium width the cortex should be gradually removed in layers and the opening deepened in this particular area until the mastoid antrum is reached. In most cases, before the mastoid, is entered, certain of the superficial mastoid cells will be opened. The walls between these cells should be broken down by means of the sharp spoon, the operator constantly aiming gradually to deepen the bony wound in the region of election until the mastoid antrum is entered.

The cortex should not be removed to any extent above the level of the superior wall of the bony canal, as this endangers the cranial fossa which may lie very low. Posteriorly, the bone should be removed for as small an extent as possible for fear of exposing the lateral sinus. Below, the wound can be enlarged with perfect safety, and it is in this region that the wound is gradually deepened to obtain a clearer field of operation until the mastoid antrum is entered. The operator will recognize that the mastoid antrum has been entered, from the fact that a probe can be passed, first slightly upward and then downward, forward and inward into the tympanic cavity. As soon as the antrum has been entered the walls of the aditus should be carefully curetted to remove all diseased tissue. The operator next proceeds to break down by means of the rongeur supplemented by the curette, all pneumatic spaces of the mastoid until the inner table of the skull is reached. The tip of the mastoid should be taken away, until the belly of the digastric muscle, filling the digastric groove, is

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fully exposed to view. Every pneumatic space must be entered and obliterated if a thorough and complete operation is to be done. As the deeper cells are removed with the curette, the instrument should be used with more caution, as sometimes the internal table is exceedingly thin, and the injudicious use of the curette may cause a wound of the lateral sinus.

A suggestion also as to the too forcible use of the curette in the bend of the aditus leading to the tympanum may be of value; for in this situation if a sharp curette be used energetically along the floor, and there be much softened bone encountered, we are liable to injure the facial nerve by the removal of a portion of the superior wall of the canal through which it passes.

If the diseased bone extend posteriorly farther back than the flap can be retracted, then a transverse incision through the posterior flap should be made, so as to facilitate a further exposure for removal.

In cleansing the operative field before dressing, a warm saline solution followed by alcohol is all that is necessary. A strip of gauze should be carried through the aditus to the entrance of the tympanum and the cavity firmly packed with gauze. Should any areas of dura have been exposed during the operation, they should be packed off from the general cavity by separate pieces of gauze in order to preserve them more safely from the possibility of infection. Two or three silkworm gut sutures are used in sewing the superior angle of the wound. Upon the gauze protruding from the wound the outer dressing is laid. This consists of a fluffy pad of iodoform gauze over which a similar pad of plain gauze is placed. Covering both of these is a layer of cotton which insures the even distribution of pressure upon the auricle when the bandage is applied.

CEREBELLAR LEPTO-MENINGITIS FOLLOWING MILD TYPE OF SUPPURATIVE OTITIS MEDIA

By FRANCIS B. KELLOGG, M. D., Los Angeles, Cal.

Read at the meeting of the Eye, Ear, Nose and Throat Section of the Los Angeles County Medical Association, May 11, 1906.

In a somewhat extensive experience with the mastoid operation, which has been attended by almost uniformly favorable results, the following case presents itself as one of the exceptions in which the surgeon stands helpless in the presence of otitis medi involving the brain.

H. A. Age 6. First presented with discharging ear from small perforation in lower segment of the left membrani tympani. History of similar attack one year before which ceased after Adenectomy without chloroform by a colleague. While the symptoms of adenoids were mitigated they still persisted in modified form. The operation was repeated under chloroform, resulting in the removal of a considerable amount of adenoid tissue. Discharge from the ear promptly ceased and small perforation persisted.

Six months after, patient presented with a pin-head polyp protruding through the perforation, and slight discharge. The polyp was picked off under cocaine and the discharge was promptly controlled. Six months later in March 1904, patient was taken with earache. Examination showed perforation closed and an inflamed but not much bulging membrane. Temperature 101. Pain disappeared under hot water irrigation. No mastoid tenderness, but temperature ranging from 101 to 102 persisted for next five days, during which time there was marked prostration. Child complained of being "so tired."

At no time did paracentesis seem indicated and I do not believe it would have changed the final result. Pressure over the mastoid was negative until the fifth day, when it showed tenderness for

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the first time. The history of repeated middle ear inflammation, together with the continued high temperature and prostration, for which the ear condition presented the only explanation, made it seem best to open the mastoid promptly upon the appearance of the first indication therefor. The child was accordingly taken to the hospital and operated the same night.

Free incision of the membrani tympani elicited a scanty discharge of pus from the middle ear. Pus was also found in the antrum. The mastoid cells which were thoroughly exposed were not involved and neither the dura nor the sinus were uncovered.

The morning after the operation the child's temperature was 99 and she asked for her dolls.There was no rise during the day and everything seemed favorable. The next morning at three o'clock her temperature rose to 102 and when I saw her at seven, she was semi-comatose. The wound was dressed and found to be in a healthy condition. She sank gradually into a state of complete coma with Cheyne-Stokes respiration and died at 7 P.M. with reference to the Cheyne-Stokes respiration Macewen states: "In cases of purulent cerebro-spinal lepto meningitis affecting the medulla in fourth ventricle, a variety of Cheyne-Stokes respiration occurs, chiefly differing from the ordinary Cheyne-Stoke respiration in the fact that the pause terminates in a long deep breath, instead of a series of very short ones." This paragraph describes the respiration in this case. The inspiration was deep and marked by a series of hysterical catches. Macewen also has the following to say: "In young children, infective disease of the tympani and antrum is prone to induce suppurative Lepto-meningitis, generally basal and involving cerebellum and basal gangliae. The soft membranes become affected through the numerous veins and nerve sheaths. In these cases *the otitis media is frequently not a prominent feature.* He mentions cases in which this sub-acute suppurative otitis media has gone on to cerebellar lepto-meningitis, without perforation of the drum.

I am of the opinion that this classification covers the case reported. That a comparatively slight otitis media of an infective type was conveyed through the veins and nerve sheaths to the brain, setting up a cerebellar lepto-meningitis.

ADDRESS TO THE GRADUATES, CLASS OF 1906, OF THE PACIFIC HOSPITAL

By JAMES HARVEY SEYMOUR, M. D., President Board of Trustees and Professor of Obstetrics, College of Physicians and Surgeons, Los Angeles, Cal., May 3, 1906.

Before proceeding with the pleasant task that has been assigned to me this evening, I want to tell you something about trained nurses in general, and this little coterie of trained nurses in particular. I am going to say something personal about them, so if they do not want to listen they can pack a little gauze or cotton in their ears.

What constitutes a trained nurse? Why two or three years of hospital training of course, you say. Yes, to be sure, that constitutes a trained nurse, but not an ideal one,—the ideal must possess something besides that, something that hospital training cannot give, it can only develop, qualities which must be in the very fiber of her being; in other words, she must be "born to the purple," possess an innate sense of refinement, an unselfish consideration of others, charitableness for their faults, (abnegation of self) and with all she must have courage and good common sense.

When with these virtues we combine the training such as the Pacific Hospital gives, we have the finished product, possessed of such stuff as heroines are made. A blessing and a joy to the sick and a boon to the physician or surgeon

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who is fortunate to have their assistance. Such a nurse is a "rara avis" to be sure, but there are such—we have them represented here tonight. I want to tell you, if you are not already aware of it, that in the Pacific Hospital when a young lady has successfully passed the trying probationery period, when she is undergoing a most searching scrutiny, and when after a three years sojourn in an atmosphere teeming with action, she successfully passes her examinations and is given her diploma. I want to tell you that that diploma means something.

It means that its possessor is more than an ordinary trained nurse—she is that to be sure in the full sense of the term—but she is something more, a representative of a high type of modern self-reliant,, courageous womanhood.

Her training has been thorough, her duties at times arduous and irksome, the discipline military in its severity. They came three years ago asking the privileges of the Pacific Hospital Training School, a body of raw recruits, gathered from all quarters of the country; from the woods of Maine; the forests of Penn., from the wilds of the Middle West and from our own glorious state. It was but natural that the California contingent should show up in little better form than their more unfortunate sisters from the East. Such was the case.

They represented then the raw material, now, after three years of training and discipline such as only the Pacific Hospital can give, they come forth self-reliant, courageous women whom I and the profession are proud to know and to have as assistants and comrades in waging war against man's greatest enemy. And it is with the greatest pleasure that I can present to them these symbols of work well done.

Ladies, I know you are worthy to be enrolled among the noble in your profession. I have seen your work; I have watched your growth; I have noted your untiring zeal and enthusiasm; I have witnessed your unfailing good-nature and patience under the most trying circumstances. I beleive you are "to the manner born," that you possess those attributes that make for true success. The glory of your life therefore will be in accomplishments. It will not be a life of ease and comfort but one of action and often of self denial—but thus it is and only thus that your characters will be strengthened. You know the old adage "There is no excellence without great labor," and so I predict that you will continue to grow. Your recompense will often be meager counted by the world's standard, but it is not wealth that counts in the making of the world but character is best formed amid those surroundings where every working hour is filled with struggle, where no flag of truce is every sent and only darkness stays the conflict.

GRADUATING EXERCISES.

The graduating exercises of the Pacific Hospital Training School for Nurses, took place at Cumnock Hall, 1500 S. Figueroa St. Thursday evening May 3rd, 1906. The following programme was rendered: Overture, Pilgrim's Chorus, Lowinsky's Orchestra; Little Grandmother, Lowinsky's Orchestra; Invocation, Rev. Hugh K. Walker; Vocal Solo, Miss Margaret Gage; Address, Rev. Robert J. Burdette; Ave Maria, Lowinsky's Orchestra; Presentation of Diplomas, Dr. J. H. Seymour; Love Song, Lowinsky's Orchestra; Benediction, Rev. Hugh K. Walker.

The following are members of the graduating class: Minnie Bartholomew, Woodbine, Iowa; Helen U. Budd, Des Moines, Iowa; Florence M. Corbett, Portland, Maine; E. Agnes Cummins, Tustin, California; Olive J. Cowan, Waynesburg, Pennsylvania; Emily Isaacson, Aurora, Illinois; Hetwich J. Koehler, David City, Nebraska; Alice M. Miller, Pittsburg, Kansas; E. Alice Mathers, Los Angeles, California; Mary L. Weitz, Farmington, California.

The address of Dr. James Harvey Seymour will be found on another page of this journal.

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THE CALIFORNIA MEDICAL AND SURGICAL REPORTER

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EDITORIAL

MASTOIDITIS AND ITS SEQUELLAE

This wisdom of the Los Angeles County Medical Association in establishing "section meetings" is well shown by the publication in this issue of the papers read May 11th upon "Mastoiditis and its Sequela" by members of the Eye, Ear, Nose and Throat section, who are to be congratulated upon the general excellence of the papers presented.

This symposium should recall to our minds the *necessity* of examining the auditory apparatus of every one of our patients; especially the ears of small children who are frequently brought to us suffering with indefinite symptoms, as peevishness, fever, auorexia, nausea, constipation, etc., often with a ready-made diagnosis of "worms" but who upon careful examination are found to be suffering from an otitis media and its complications.

We should recall that in young children the accessory air spaces are but slightly developed and that the mastoid walls are comparatively resistant, hence the tendency in these patients to involvement of the upper tympanic wall with extension to the meninges and the brain.

This may occur by contiguity or in the acute infectious diseases as scarlet fever, diptheria, etc., especially if of virulent character by way of the circulation, producing a septic phlebitis of the osseous tissues or of the brain itself with or without necrosis and formation of pus. We should especially recall this possibility if the patient has high fever with marked remissions and involvement of the joints and synovialsacs. The less frequent involvement of the lungs and pleura serve to distinguish this condition from sinus pyaemia.

Many of these cases are rapidly fatal, terminating with the manifestations of acute sepsis.

It appears to me that the importance of early incision of the tympanum as an absortive measure was not sufficiently emphasized.

I regret that the consideration of brain abscess was not more complete for although of infrequent occurrence it is of importance as fully one third of the cases are due to middle ear diseases.

T. G. DAVIS, *M.D.*

THE DOCTOR AND THE AUTOMOBILE

Can a doctor run an automobile and be a Christian? Morphine saps the manhood and makes a thief and a liar, whiskey brutalizes and makes a man a drivel ling idiot, and an automobile makes a man swear like a pirate. It is harder for a man running an automobile to abstain from profanity, than for a rich man to enter the kingdom of heaven.

A doctor starts out on a beautiful June morning with a nice cream suit, a lovely white vest, he knows he must be at the hospital in forty-five minutes, but depending upon a swift running automobile he believes he can make three calls which happen to be close together, and then reach the hospital at the appointed time. He does not wish to disappoint his associates in the operating room, he does not wish to come back and make the calls after a long and tedious operation, therefore he decides to make the calls before he goes to the hospital.

With a light heart he approaches his

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machine, he turns the spark, he primes it, the engine starts gaily, coughs, sputters and dies, he conquers her again, this time she starts more gaily, in fact more gaily than ever, she coughs, sputters and then with a long sigh she lapses into a state of coma, the doctor opens the machine and looks in. He gets a beautiful black streak of grease across the front of his white vest, his collar is tight and he gives it a hitch and leaves the impression of his finger and thumb upon the linen. He finds that the lubricating oil is dropping too rapidly, he opens the petcock and by fierce cranking he cleans out the cylinder. His collar is now in a state of collapse and if he is a Christian he will say "By George," which means in other words the same as a good "fat dam" brought out with explosive emphasis. He looks at his watch and sees that he must make at least two calls; he starts the machine again and proceeds until within four blocks of the hospital when the engine begins to give signs of distress and symptoms of asthma, the clutch begins to slip and the doctor steers the derelict alongside the curb, leaps out, grabs his grip and hastens on foot to the hospital, ten minutes late, warm, tired and disgusted. He rushes to the telephone; rings up the repair man and tells him that he is going to be detained at the hospital for an hour or two; that he must rush a man out there and fix his machine, so that he can proceed with it as soon as the operation is finished. When he emerges from the operating room he is told to ring up the repair man. He does so and this is what he hears: "Doctor, this is Skeggs at the garage; I have looked your machine over and find a knock in the engine, a ring on the piston is worn out, the fly wheel loose and the valve on the right rear tire is leaking." With a groan the doctor asks the repair man how long it will take to have it repaired, and is informed that it will not take more than ten days at the most; that is, if they can find the things needed in town; if they have to be made or sent for to the factory, of course, it will be somewhat longer.

The doctor rapidly runs through his mind the widely scattered places he must visit, and thinks of the many confinement cases which are sure to happen in the middle of the night, necessitating hack fares, and recalls the last "unpaid alas" repair bill.

He then lights a strong black cigar and proceeds to the side veranda and in the shade of the old elm tree "cusses."

J. Lee Hagadorn, M. D.

PSYCHOLOGY OF THE EARTHQUAKE.

A San Francisco Reminiscence.

To go to bed at night with mind at rest and confident for the coming day; to be awakened slowly by uncommon noises; to get up, to stagger; to be struck by walls, door, chairs; to become reassured and take time to gather little belongings; to go forth leisurely still possessed of the faith in all things before permanent; to see wrecked streets and frightened men; to reassure fainting women that things are not so bad as they thought; to walk and again hear the unknown noise and to stagger, to feel the heart stop and the face blanch; to be seized by the infection of the panic; to run; to dodge falling walls; to leap opening cracks; to jostle other humans; to be pursued by fire and smoke; to be cut off; to escape; to lose hope; to forget the possibility of a future—that is the earthquake.

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To wander interminably amid chaos, the higher man in abeyance, and only the animal seeking to save itself; to awaken as from a dream and find the tremors over, the ground firm under foot and the sky clear; to think of eating, drinking and sleeping, to hunt for loved ones, to gather again the threads of business, to live, but to be assailed a thousand times while eating, sleeping, drinking; working with an instant re-experiencing of it all, and all the time to be unable to drive from the subconscious nerves the feeling that the end of all things had come,—that is the Psychology of the Earthquake.

CASE TEACHING IN MEDICINE.

A series of graduated exercises in the differential diagnosis, prognosis and treatment of the actual cases of disease—By Richard C. Cabot, A. B., M.D., Harvard. Instructor in medicine in the Harvard Medical School and Physician to out-patients at the Massachusetts General Hospital.

D. C. HEATH & Co.,
Publishers, Boston, Mass.

This book is a collection of case histories clearly and succinctly stated and from this point of view alone is valuable, in pointing the way the student should study a case. The art of recognizing the physical signs of disease and arranging the facts observed, in logical sequence has much to do with the ease and certainty with which we may arrive at an accurate diagnosis.

To teach the student to observe carefully, and to think logically and correctly should be the aim of the medical teaching.

The first must be clinical, either in the dispensary or at the bedside but the latter can oftimes be done "if the senses are not distracted by the presence of the patient."

By the methods suggested we can amplify and extend clinical teaching, direct the pupil in gathering facts and to use the knowledge he has acquired by reading and from lectures, in the laboratory and from bedside study, in such manner as to disentangle the suggestive and essential from that which is irrelevant and misleading.

This book by Dr. Cabot will prove useful to the student and to the teacher, in class work I commend it.

THEODORE G. DAVIS, M.D.
Professor of Clinical Medicine in the College of Physicians and Surgeons, Los Angeles.

THE INTERNATIONAL MEDICAL ANNUAL.

A Year Book of Treatment and Practitioner's Index. Contributors: Jos. Blumfeld, M. D., and Thirty Others. 1906 Twenty-fourth Year. New York: E. B. Treat & Company, 241-243 West 23rd St. Price $3.

This is the twenty-fourth year of this valuable compilation. In spite of the unfortunate fire in the Medical Annual Office, which caused the destruction of the type and manuscript, at the moment when a large part of the present work was all ready for printing, the publishers have succeeded in bringing out the work complete in every part. This work will prove of great value to practitioners of medicine.

The book gives the recent views of every disease at a glance, and is begun by a general review of the recent therapeutic progress, by Ralph Stockman and Frank J. Carteris of Glasgow University. This is followed by a dictionary of remedies and is arranged in alphabetical order, and has a description of the chemical composition, physiological action and therapeutic uses of all the newer remedies, especially those not found in the ordinary text book of medicine.

Much space is given to the organotherapy, radio-activity and electro-therapeutics, and is handled by Edward Reginald Morton of the London Hospital,

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who describes the action of the X-Ray, in the various chronic malignant diseases of the skin, and describes all the newer currents of the latest apparatus.

Then comes the dictionary of treatment, by many contributors. This includes all the latest about anesthesia, dermatology, diseases of children, general medical and general surgery, infective fevers, nervous diseases, obstetrical and gynaecology, opthalmology, rectal surgery, tropical and venerial diseases.

There are thirty-two excellent plates and many figures and cuts. The list of contributors includes many of the famous Scotch, English, German and American writers of the present day.

J. LEE HAGADORN, M. D.,
Associate Professor of Medicine, College of Medicine of the University of Southern California.

The Yerkes hospital foundation of six million of dollars was established by the late Charles Tyson Yerkes. A great hospital will be built in the Bronx Borough out of this benefaction. This part of the metropolis, situated as it is above the Harlem River, is become a city in itself—and one indeed of no mean proportions. There have heretofore been in this region no hospital accommodations proportionate to its growth and development; the need will, however, now be magnificently supplied by this bequest.

For the Menopause the plan of treatment should aim to sustain the organism by means of the alleviation of nervous irritability and by supplying sufficient stimulus and nourishment to keep the patient as nearly as possible at the normal standard of health, states Upshur. Drugs (especially narcotics and alcohol) should be avoided where simpler and less active agents will accomplish the same ends. Hygienic regulations of all the functions and habits (especially sleep) should be attended to.

Physicians' fees should be regulated upon the basis that the physician should have an estimate of the value of his services, operative or otherwise, fixed in his mind, declares Dr. John B. Roberts. The amount should be based upon his experience and skill—not so low as to coax away unjustly the patients of one's younger and less experienced colleagues. The fee should be lessened when the financial position of the patient would make its payment a serious burden. A well-to-do patient should pay the full fee, which should be generous in order to recompense the physician for his expensive education and hazardous life. But this fee should not be increased because the patient may be a very wealthy person, unless an unusual time is given to the service or an additional responsibility is placed on the physician by reason of the man's position.

Before introducing a filiform, olive oil should be injected in the urethra (Brinton). The penis should be drawn tense and the instrument passed with a rotary motion. If one will not pass, others must be inserted until half a dozen are introduced and the orifice found.

AUTOMOBILES BY THE CARLOAD.

One of the largest allotments of automobiles ever made by any manufacturer is that which has just been received by J. W. Wilcox & Son of Twelfth and Main streets, agents for the Maxwell. This shipment comprised seventy-five cars, sixty of which are runabouts, and the others touring cars, all of the Maxwell design. The train was decorated with flags and banners and came over the Salt Lake.

The shipment was such an unusual event in automobile circles that the Salt Lake will furnish photos of the cars as they will appear en route to Los Angeles.

Three carloads of tourabouts were shipper from the factory at Tarry-town, N. Y., as follows: April 19, April 26, May 1.

J. W. Wilcox and Son have secured the agency of the Aero car. The Aero is a four-cylinder, 24 horse-power touring machine, shaft drive and air-cooled, and has a seating capacity of five per-

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sons, side entrance tonneau with novel feature of front doors.

These doors are easily detached as required. The car is royal blue in color, a distinguishing feature, and the total weight is less than 2000 pounds. The wheel base is 104 inches, standard wheel tread. The tire dimensions are 4x34, breaks two (rear hub) and transmission. Gasoline capacity twenty gallons, frame pressed steel, jump spark ignition and storage battery, sliding gear transmission; speeds three forward and reverse. Leather-faced cone, clutch, nine inches clearance, extension top.

The Wilcox agency is to be congratulated upon receiving the rights of this machine, adaptable as it is for every contingency that may arise.

The pronounced success of the agency has been so great that it became necessary to order the Maxwell cars by the train-load instead of two cars a week as formerly.

In coughs due to pregnancy Dr. Jewitt gives sedatives, such as a pill of valerianate of iron, quinine and zinc after meals; or cannabis indica or bromides.

IMPORTANT NOTICE.

Judging from communications recently received, our reference to the "stegomyia fasciata" in connection with the "stegomyia punctata" has caused some physicians to suppose that we recommended Tongaline for yelow fever. This we emphatically disclaim.

The mention of these two species of mosquitoes was for the purpose of indicating that the mode of inoculation of yellow fever and malaria was precisely the same, and a careful reading of our statement will show that we had no intention to suggest that Tongaline was indicated in yellow fever, but on account of its pronounced eliminative action it did possess decided therapeutic value in the treatment of malaria.

We regret exceedingly that the notice referred to should have been misunderstood or misconstrued by anybody.

Mellier Drug Company, St. Louis.

MISCELLANY.

Dr. Tyson finds Dover's powder a useful remedy in the dose of 2½ grains every two hours in acute bronchitis.

Strophanthin, sparteine or cactin is safer in fatty heart than the more powerful tonics, digitalin and strychnine.

The aromatic tincture of rhus in 5 to 10 drop doses three times a day is at times a very efficacious remedy for enuresis in children.

Don't prophesy until you know is a very good maxim, which was, however, recently ignored by a newspaper man overeager for an item. He detailed a difficult operation by a Roosevelt Hospital surgeon as having been done nearly twelve hours before the operation in reality took place. The surgeon who later officiated at the reported removal of a stone from the kidney was astonished and amused to read at breakfast on the success of his work, which he was not to begin until that afternoon.

The importation of opium except for medical purposes has been prohibited in all the Australian States. The Chinese are the chief customers for the drug in that part of the world, where the drug is grown locally, some twenty-eight tons having been produced in a year. These prohibitions, following upon the Transvaal enactment, is a decided triumph for the Anti-Opium Society. There will be some loss of revenue; Queensland alone has derived some $50,000 a year from this traffic. The gain, however, is worth the sacrifice.

Radium cures were recently demonstrated by Dr. Robert Abbe. Superficial cancers, lupus vulgaris, and even goitre were among his cases. On the other hand equally competent observers very gravely deprecate the use of this element, declaring that it is not curative, and that much valuable time is lost by its prolonged use. We believe that at present there is need for great conservatism in this matter. Dr. Abbe agrees with all good observers that radium has no action upon deep-seated cancers.

Absent Treatment by Mail.—Mrs. Helen M. Post was recently found guilty

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in the United States Court at Jacksonville in Florida on the charge of using the mails for fraudulent purposes. She professed to cure all ills to which flesh is heir by "absent treatment," and declared that she was at the head of a school of "a million or more." One can thus by the help of a large clerical force manage a large and very remunerative practice. The sentence was to pay $500 fine and to spend thirty days in jail.

RE-ESTABLISHED AT OAKLAND.

The San Francisco branch of the Abbott Alkaloidal Co. has been re-established with Mr. S. T. Platt their manager at 1361 Franklin Street, Oakland.

Meanwhile they extend every courtesy at their Northwest branch at Seattle, 314 Pacific Block, and through the trade at Los Angeles, where we are fully represented by the Off Drug Co., and F. W. Braun & Co., and partially by the trade in general. Large stocks have been rushed these points, sufficient, we trust, to meet every requirement. Orders direct to the home office will, as ever, receive prompt attention.

EVERYTHING THE BEST.

Of the very best quality and prepared in the very best manner is everything you like in the way of eatables and drinkables at the ANGELUS GRILL, corner Spring and Fourth Streets. The music furnished at this popular place is of the highest order, as is everything else in connection with the ANGELUS HOTEL.

TRY IT ONCE.

If you feel the need of renovation and are getting tired of taking all kinds of "dope" for your weakened constitution, go up to FAIRVIEW MINERAL SPRINGS and take a few baths and you will be all right. Drop a line to Mr. J. C. White, secretary, 701 Johnson Building, or call up Home 5002 or Sunset Main 1962, for further information.

FOR GOOD HEALTH.

Your appetite and digestion will improve and you will be much happier by calling at MORLEY'S GRAND AVENUE SKATING RINK and donning a pair of steel roller ball-bearing skates and gliding over the finest skating floor in Los Angeles.

A GOOD THING.

Blaine, Ill., July 19, 1900.

McCoy, Howe Co., Indianapolis, Ind.

Dear Sirs.—Antiseptic Sphenoids received. I like them. Thanks. Truly you are sending out a good thing. Thanking you again. Yours truly,

C. M. H. WRIGHT, M. D.

Look at your shirt bosom after it comes home from our laundry; notice how beautifully "slick and smooth" it is, and how the neckband really fits your neck. Do you wonder why your collars wear out so quickly? Don't blame the collars—send them to MUNGER'S LAUNDRY, 923-925-927 S. Los Angeles St. Both phones 1350.

The Japanese, during the late unpleasantness, lost but 15,000 men from sickness, as compared with 57,000 from wounds—a proportion unparalleled in military history. In most wars these figures have been reversed.

Pawley and McCreedie, the local Peerless agents, have disposed of their entire 1906 allotment, and are endeavoring to secure extra machines. The last of the thirty-horsepower machines have been shipped and the two forty-five-horsepower cars are expected within four weeks.

Dr. Sewall considers the disappearance of the second cardiac sound at the apex a distinct indication for phlebotomy.

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Charles Marchand

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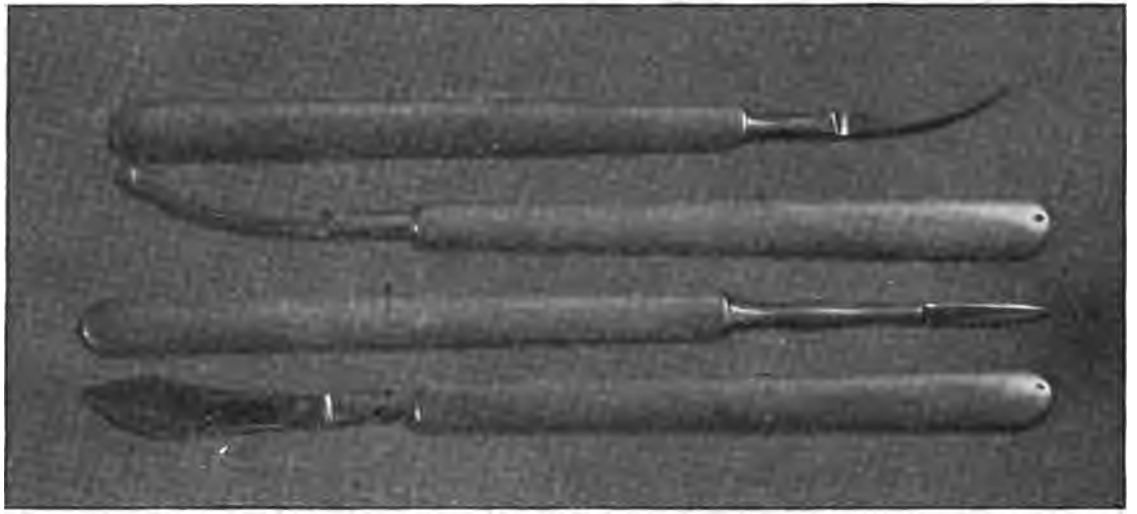

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Yours truly,
DR. E. A. THOMAN,
Fresno County Health Office.

San Francisco, California.
Tempered Ductile Metals Co.,
Los Angeles, Cal.

Gentlemen: I have been using one of your Gold Hypodermic Needles for the last three months, and consider it the best article in that line on the market today. Yours sincerely,
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Tempered Ductile Metals Co.,
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Dear Sirs: This certifies that after two years' constant use of Vaughn's Asceptic Gold Needle for hypodermic practice, I find it simply perfect.
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L. G. VAN SCOYOC, M. D.
Professor of Gynecology and Orificial Surgery.

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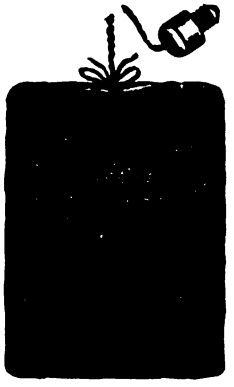

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Coughs and Respiratory Affections

TO effect the relief—cure—of the several varieties of Cough, the Acute and Chronic Affections of the Respiratory Tract, the physician now, almost instinctively, prescribes

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The value of this preparation in the treatment of Coughs, Bronchitis, Phthisis, Pneumonia, and kindred disorders, is not a thing that is to be established; it has already been established to the complete satisfaction of the medical profession for whose use it is expressly designed.

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